

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
10 June 2004 (10.06.2004)

PCT

(10) International Publication Number  
WO 2004/048413 A3

(51) International Patent Classification<sup>7</sup>: C07K 16/30

(21) International Application Number:  
PCT/GB2003/005163

(22) International Filing Date:  
26 November 2003 (26.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0227644.2 27 November 2002 (27.11.2002) GB

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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:  
29 July 2004

[Continued on next page]

(54) Title: CD55-INTERACTION PARTNERS AND THE USES THEREOF

## a. CDR amino acid sequences of 105AD7 anti-idiotypic antibody

CDR	Kappa (L)	Heavy (H)
1	itcRASQDISSFLNwyq	ntSGVCVGwI
2	liyAASILQSpvn	wlaHIYWDDDKRYSPSLKSrlt
3	yyQQCSYKTPPSfgq	caqVLYYDFWSGYLEYFAYwqg

## b. Alignment of CDRs with CD55

SCR-1 (1C)	-> <-	SCR-2 (2N)
83 K G S O W S D I E E F 93 C N R S C E V P T R L N S A S L K Q P		101 W D D D K R Y S P S L K S
R A S Q - - D I S S F L N		112

105AD7 CDR L1

105AD7 CDR H2

SCR-2 (2C)		aa number
145 S L S P K L T C I Q N L K W S T A V E F C K K K		CD55
• • • • • • • • •		
V L Y Y D F W S G Y L E Y		
105AD7 H3		

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## INTERNATIONAL SEARCH REPORT

Inte      nal Application No  
PCT/GB 03/05163

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C07K16/30

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C07K C12N G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

MEDLINE, BIOSIS, EPO-Internal, WPI Data, PAJ, EMBASE, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	BALDWIN R W ET AL: "Monoclonal antibody 791T/36 for tumor detection and therapy for metastases." SYMPOSIUM ON FUNDAMENTAL CANCER RESEARCH. UNITED STATES 1983, vol. 36, 1983, pages 437-455, XP009028841 ISSN: 0190-1214 the whole document ---- -/-	1-27

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

## • Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the International filing date
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- \*P\* document published prior to the International filing date but later than the priority date claimed

- \*T\* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*S\* document member of the same patent family

Date of the actual completion of the International search	Date of mailing of the International search report
6 May 2004	09/06/2004
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3016	Authorized officer  Celler, J

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Inte      nal Application No  
PCT/GB 03/05163

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>SPENDLOVE IAN ET AL: "Mapping the binding site of a novel antibody to SCR-1 and 2 of CD55"          IMMUNOLOGY,          vol. 98, no. suppl. 1,          December 1999 (1999-12), page 101          XP002279070          Joint Congress of the British Society for Immunology and the British Society for Allergy and Clinica; Harrogate, England, UK; November 30-December 03, 1999          ISSN: 0019-2805          the whole document</p> <p>---</p>	1-27
X, P	<p>BRADLEY R G ET AL: "A monoclonal antibody directed against SCR1-2 of complement control protein, CD55 enhances C3 deposition and tumour cell lysis."          BRITISH JOURNAL OF CANCER,          vol. 88, no. Supplement 1,          July 2003 (2003-07), page S39 XP002279071          British Cancer Research Meeting 2003; Bournemouth, UK; July 02-05, 2003          ISSN: 0007-0920 (ISSN print)          the whole document</p> <p>---</p>	1-27
X	<p>WO 98/06838 A (HAMANN JOERG ; LIER RENE ANTONIUS WILHELMUS V (NL); STICHTING CENTR) 19 February 1998 (1998-02-19)          abstract          page 7, line 30 - line 37          page 19; claims 16-27</p> <p>---</p>	1-27
X	<p>WO 00/37489 A (MUELLER HERMELINK HANS KONRAD ; VOLLMERS HEINZ PETER (DE)) 29 June 2000 (2000-06-29)          page 3, line 16-18          page 6, line 20          page 7, line 11 - line 17          page 7, line 27 -page 8, line 3          page 8, line 24 - line 31</p> <p>---</p>	1-22, 24-27
X	<p>PIMM M V ET AL: "A BISPECIFIC MONOCLONAL ANTIBODY AGAINST METHOTREXATE AND A HUMAN TUMOUR ASSOCIATED ANTIGEN AUGMENTS CYTOTOXICITY OF METHOTREXATE-CARRIER CONJUGATE"          BRITISH JOURNAL OF CANCER, LONDON, GB,          vol. 61, no. 4, 1990, pages 508-513,          XP009028842          ISSN: 0007-0920          abstract          page 508, column 1 -column 2</p> <p>---</p>	1-22, 25, 26
		-/-

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Inte  
nal Application No  
PCT/GB 03/05163

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SPENDLOVE I ET AL: "Decay accelerating factor (CD55): a target for cancer vaccines?" CANCER RESEARCH. UNITED STATES 15 MAY 1999, vol. 59, no. 10, 15 May 1999 (1999-05-15), pages 2282-2286, XP002279072 ISSN: 0008-5472 abstract ---	1-27
X	HAMANN J ET AL: "Characterization of the CD55 (DAF)-binding site on the seven-span transmembrane receptor CD97." EUROPEAN JOURNAL OF IMMUNOLOGY. GERMANY MAY 1998, vol. 28, no. 5, May 1998 (1998-05), pages 1701-1707, XP002279073 ISSN: 0014-2980 abstract ---	22-26

## INTERNATIONAL SEARCH REPORT

Application No  
PCT/GB 03/05163

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 9806838	A	19-02-1998	AU	733249 B2		10-05-2001
			AU	3869897 A		06-03-1998
			CA	2263219 A1		19-02-1998
			EP	0920502 A1		09-06-1999
			JP	2001503248 T		13-03-2001
			WO	9806838 A1		19-02-1998
			NO	990581 A		08-04-1999
			US	6328968 B1		11-12-2001
WO 0037489	A	29-06-2000	DE	19909771 A1		29-06-2000
			AU	2795500 A		12-07-2000
			CA	2356189 A1		29-06-2000
			WO	0037489 A2		29-06-2000
			EP	1141019 A2		10-10-2001
			JP	2002534357 T		15-10-2002